CARRIER AIR CONDITIONING SUPERFUND SITE

FIVE-YEAR REVIEW

AUGUST 28, 2000

U.S. Environmental Protection Agency
Region IV

CARRIER AIR CONDITIONING
FIVE-YEAR REVIEW SIGNATURE COVER

SITE NAME, LOCATION, AND EPA ID
Carrier Air Conditioning
97 Byhalia Road
Collierville, Tennessee 38017

TND04406222

SITE STATUS
Carrier Air Conditioning was finalized on the National Priorities List in 1990. The remedy is complete. The Site was a PRP-lead RI/FS and is a PRP-lead RD/RA. The Site has continued operating a manufacturing facility during the Superfund investigation and cleanup. Some development has occurred adjacent to the Carrier Site; however, the physical conditions on the Site - and most importantly in the impacted areas - remain the same.

REVIEW STATUS
The Five-Year Review conducted at the Carrier Site is required by policy. Treatment is ongoing, and hazardous substances are still present on Site at concentrations above protective levels for unrestricted exposure and unlimited use. When the remedial action is complete, the remedy will achieve unlimited use and unrestricted exposure, but the remedial action will need more than five years to complete. The Preliminary Close Out Report, October 31, 1995 is considered the "trigger" for this five-year review. The next Five-Year Review will be required in 2005, five years from the completion date (i.e., signature date) of this Five-Year Review Report.

RECOMMENDATIONS AND REQUIRED ACTIONS
Routine maintenance will be conducted to continue optimum performance of the soil vapor extraction systems and the groundwater pump and treat system. Soil borings in the source areas, the Main Plant Area and the North Remediation System, will be collected and evaluated to determine if shutdown of the soil vapor extraction systems is viable.

PROTECTIVENESS STATEMENT
The remedy implemented at the Main Plant Area, North Remediation System, and Water Plant #2 at the Carrier Site are protective of human health and the environment. Results of the Five-Year Review indicate that:

- Mass removal at the two soil vapor extraction treatment areas is ongoing, and significant mass reduction has occurred since the systems were installed. Approximately 14,100 pounds of TCE have been removed from soils and shallow groundwater.

- Groundwater extraction rates are being maintained at levels sufficient to contain the TCE plume. The Collierville wells have maintained production at 1 MGD with little downtime. Approximately 3,719 pounds of TCE have been removed from the Memphis Sands since the system was installed.

Conditions at the Site are not expected to change in the near future, given the area's land use (industrial/commercial) and zoning controls currently in place. Access controls and surface conditions (e.g., pavement in the Main Plant Area) are adequate to prevent exposure.

August 28, 2000
Date

Signed by Richard D. Green
Richard D. Green
Waste Management Division Director

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Acronyms

µg/kg	Micrograms per kilogram
µg/L	Micrograms per liter
AF	Adherence factor
bgs	Below ground surface
BRA	Baseline Risk Assessment
CDI	Chronic daily intake
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfm	Cubic feet per minute
CFR	Code of Federal Regulations
DCE	Dichloroethene
ED	Exposure duration
FS	Feasiblity study
gpm	Gallons per minute
HI	Hazard index
hp	Horsepower
ID	Inner diameter
ILCR	Incremental lifetime cancer risk
lbs/day	pounds per day
MCL	Maximum Contaminant Level
MGD	Million gallons per day
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
MPA	Main Plant Area
NCP	National Contingency Plan
NRS	North Remediation System
O&M	Operations and maintenance
PCE	Tetrachloroethene
PVC	Polyvinyl chloride
RA	Remedial action
RAO	Remedial action objective
RBC	Risk-based criteria
RD	Remedial design
RfD	Reference dose

RI	Remedial investigation
ROD	Record of Decision
RPM	Remedial Project Manager
SA	Surface area
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SVE	Soil vapor extraction
TCE	Trichloroethene
TDEC	Tennessee Department of Environment and Conservation
TDOT	Tennessee Department of Transportation
UCL	Upper confidence level
USEPA	U.S. Environmental Protection Agency